

Serial No. 10/575,501
Art Unit 2624

Docket No. PU040276
Customer No. 24498

REMARKS

The present application contains claims 1-10. To better point out and claim their invention, applicants have amended claims 1, 6 and 8. Ample antecedent basis exists in the specification, particularly at page 2, lines 10-16 and lines 26-32 as well as pages 3-8.

Before proceeding to address the examiner's rejections, applicants will briefly summarize their invention to assist the examiner in better appreciating the differences between applicants' invention and the art of record. As recited in now amended claim 1, applicants provide a method for reducing subjective artifacts in a video image. The method commences by first receiving supplemental information that includes at least one parameter that specifies an attribute of noise for addition to an image to hide such artifacts. Thereafter temporally correlated noise is generated. A determination is made in accordance with the at least one parameter, whether to add the temporally correlated noise, and if so, adding such noise to the image at a level in accordance with the at least one parameter, to substantially hide artifacts. Adding temporally correlated noise, referred to as "comfort noise" serve to reduce human sensitivity to artifacts in the image, allowing for an enhanced viewing experience.

35 U.S.C. §101 Rejection of Claim 1

Claim 1 stands rejected under 35 U.S.C. §101 as drawn to a non-statutory process. As presently amendment, claim 1 fully complies with 35 U.S.C. §101 for the reasons given below.

As announced by the Court of Appeals for the Federal Circuit in the recently decided case *In Re Bilski*, 545 F. 3d 943, 953 (Fed Cir. 2008), the appropriate test for determining compliance with 35 U.S.C. §101 is the "machine or transformation" test as elucidated by the U.S. Supreme Court in *Benson*, 409 U.S. 70. In particular, to be eligible for a patent under 35 U.S.C. §101, a process must be tied to a particular machine or transform a particular article to a different state or thing.

Applicants maintain that claim 1 clearly satisfies the "transformation" prong of the machine or transformation test as set forth in *Bilsky* because the process recited in claim 1 transforms an article (e.g., an image) having subjective artifacts into a

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different state, that is, an image having reduced artifacts by virtue of the addition of temporally correlated noise. The examiner should appreciate that the transformation of the image in claim 1 to reduce subjective artifacts does not constitute a mental process that lacks significant physical steps. As part of applicants' claimed process, a determination must be made in accordance with at least one parameter accompanying the image as to whether to add noise to hide artifacts. This determination cannot simply be done as a mental process. Rather, an examination of the parameter must occur. On this basis, the examiner cannot simply reject applicants' claims as lacking significant physical steps.

Applicants claimed process recited in claim 1 is limited to a practical application of a fundamental principle, namely the addition of noise to an image to hide artifacts. Both the correlated noise and the image to which such noise is added constitute physical entities, so the addition of noise constitutes a physical activity having practical application. Applicants claims are thus limited to creating a physical object, constituting a 'safe harbor' as established by the Federal Circuit in *Bilski* (545 F. 3d 943 at 963). On this basis, applicants' claim 1 fully complies with 35 U.S.C. §101. Applicants respectfully request withdrawal of that rejection.

Objection to Claim 1

The examiner objects to claim 1 because of certain informalities. In particular, the examiner objects to claim 1 because the phrase "in accordance" does not specify any parameter related to the temporally correlated noise. Applicants have now amended claim 1 to remove the phrase "in accordance" thereby obviating the examiner's objection to claim 1.

35 U.S.C. 102(a) Rejection of Claims 1, 6, and 8-10

Claims 1, 6, and 8-10 stand rejected under 35 U.S.C. 102(a) as anticipated by the publication "SEI Message for Film Grain Encoding", Cristina Gomila et al., Joint Video Team (JVT) of ISO/IEC MPEG ITU-T-VCEG, 8th Meeting, Geneva CH 23-27 May 2003 (hereinafter, the Gomila et al. publication), which as discussed below, concerns film grain simulation. Applicants respectfully traverse this rejection.

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The examiner's rejection of applicants' claims over the Gomila et al. publication ignores a fundamental difference between the film grain simulation model described in the publication and applicants' claimed invention which seeks to substantially hide artifacts in an image by the addition of temporally correlated noise. Film grain simulation, as described in the Gomila et al. publication seeks to add noise to create film grain for blending with an image, **thereby creating artifacts in that image**. In contrast, the present invention adds noise where necessary to substantially hide artifacts, completely contrary to the object of film grain simulation. To that end, applicants direct the examiner's attention to the statement at Page 9, lines 8-10 of the Gomila et al. publication which discusses the desirability of smoothing blocking artifacts arising from the addition of the film grain by the use of a 3-tap filter. This statement says nothing regarding the desirability of adding comfort noise where necessary to substantially hide artifacts, nor would the statement in the Gomila et al. publication provide any such suggestion to the skilled artisan to add such comfort noise where necessary.

As now amended, applicants' claims 1 and 6 and the claims that depend therefrom now recite the feature of:

making a determination, in accordance with the at least one parameter, whether to add the temporally correlated noise, and if so, adding such noise to the image at a level in accordance with the at least one parameter, to substantially hide artifacts.

Applicants' step of determining whether to add the noise, and is so and what level is not taught or suggested by the Gomila et al. publication. For this reason alone, claims 1 and 6 and the claims that depend therefrom patentably distinguish over the art of record. Accordingly, applicants request withdrawal of the 35 U.S.C. 102(a) rejection of claims 1, 6 and 8-10.

35 U.S.C. 103(a) Rejection of Claims 2-5 and 7

Claims 2-5 and 7 stand rejected under 35 U.S.C. 103(a) as obvious over the Gomila et al. publication, as discussed above with respect to the 35 U.S.C. 102(a) rejection of claims 1, 6 and 8-10, further in view of US patent 5,768,403 to Suzuki et al. Applicants respectfully traverse the rejection for the reasons given below.

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Applicants have discussed the Gomila et al. publication at length above and for the sake of brevity, will not repeat that discussion again. For the purpose of addressing the instant rejection, applicants reiterate that the Gomila et al. publication does not teach or suggest the desirability of adding temporally correlated noise for hiding artifacts, let alone the feature of

making a determination, in accordance with the at least one parameter, whether to add the temporally correlated noise, and if so, adding such noise to the image at a level in accordance with the at least one parameter, to substantially hide artifacts.

The Suzuki et al. patent concerns a technique for identifying an image area using pixel values to determine the presence of various colors. The patent says nothing at all regarding the desirability of adding noise to an image, let alone making a determination of whether to add noise, and if so how much based on supplemental information carried with the image. Given that neither the Gomila et al. publication nor the Suzuki et al. patent teach the desirability of adding temporally correlated noise to an image to *hide artifacts*, the combination of these references would not teach all of the features of applicants' claims 1 and 6 and claims 2-5 and 7, respectively, that depend therefrom. Therefore, applicants request withdrawal of the 35 U.S.C. 103(a) rejection of claims 2-5 and 7-10

Conclusion

In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

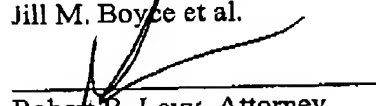
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No fees are believed due with regard to this Amendment. Please charge and
fee or credit any overpayment to Deposit Account No. 07-0832.

Respectfully submitted,
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